



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/786,368	10/03/2001	Jian Kang Wu	P20715.P02	6169
7055	7590	03/08/2004	EXAMINER	
GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191			AMINI, JAVID A	
			ART UNIT	PAPER NUMBER
			2672	9
DATE MAILED: 03/08/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,368

Applicant(s)

WU ET AL.

Examiner

Javid A Amini

Art Unit

2672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 25 and 26 is/are rejected.
- 7) ☒ Claim(s) 7-24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3, 6-8</u> . | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 2672

Claim Objections

Claims 3-5 objected to because of the following informalities: The word center misspelled as a "center". Appropriate correction is required.

Claim Objections

Claims 7-24 objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claims 5 and 6. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 25 and 26 rejected under 35 U.S.C. 102(e) as being anticipated by Inselberg et al. (hereinafter referred as an Inselberg).

1. Claim 1.

A method for the vectorization of line objects in a colour or grayscale image comprising the steps of: Inselberg in figs. 8 and 9 illustrates this limitation "collecting sample data of line points on line objects within said image", Inselberg in fig. 9 illustrates the size the length the angles and other features of the line points, "extracting multiple features from the collected sample data to represent characteristics of the line points", Inselberg in figs. 8 and 9 illustrates a multi-dimensional line points, "grouping said data into a plurality of clusters in a multi-dimensional

Art Unit: 2672

feature space, each said cluster comprising a plurality of line points having feature measures within a selected criteria set”, Inselberg in fig. 14 illustrates the limitation of “detecting further line points by matching image points to said clusters and rejecting image points not falling within any cluster”, Inselberg in figs. 8 and 9 illustrates the step of “performing a line tracing operation based on the detected line points and features”; Inselberg in figs. 6A and 6B steps 34 and 56 illustrates identifying and correcting possible errors”.

2. Claim 2.

Inselberg in fig. 7 illustrates the step of “sample data is collected interactively by means of a user identifying two points on a line and said sample data corresponding to line points between said identified points”, in step 72.

3. Claim 3.

Inselberg in fig. 7 illustrates the step of “the line center of each line point is located prior to said multiple features being extracted”.

Claim 4.

Inselberg in fig. 7 illustrates the step of “the line center of each identified point is also located”, steps 72-78.

4. Claim 6.

A method as claimed in claim 3 or claim 4 wherein the line center is located by determining the peak of the colour profile line width average function at the point location. Inselberg in col. 12, lines 45-52 discloses that the region between the parallel axes in figs. 10 and 12 is broken up into point neighborhood buckets or bins by defining $(\Delta r, \Delta \theta)$ where $\Delta \theta$ determines the horizontal width of the bucket and Δr determines the vertical width.

Art Unit: 2672

5. Claim 25.

Apparatus for vectorization of line objects in a colour or grayscale image comprising, means for semi-automatically collecting sample data of line points on line objects within said image, means for extraction of multi-dimensional feature measures from said sample line points, classifying means for grouping said data into clusters each said cluster having a plurality of line points having feature measures within a selected criteria set, means for comparing image points with said clusters to find image points that match with said clusters and for rejecting image points that do not match with any cluster, means for performing a line tracing operation based on detected line points and features, and means for identifying and correcting errors. See rejection of claim 1.

6. Claim 26.

A method for the vectorization of line objects in a colour or grayscale image in which sample line points are used to generate a plurality of prototypes, each said prototype comprising a cluster of line points having parameters within defined ranges, and in which line points are detected from the image by matching image points with said prototypes and assigning an image point to a line point where there is a match and rejecting an image point where there is no match. See rejection of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 rejected under 35 U.S.C. 103(a) as being unpatentable over Inselberg and further in view of Queisser et al. (hereinafter referred as a Queisser).

7. Claim 5.

A method as claimed in claim 3 or claim 4 wherein the line center is located by determining the peak of the colour ridge profile of the line at the point location. Inselberg does not explicitly specify that the peak of color indicate the same as the line center. But Queisser in fig. 6 illustrates best-fit line in step 106. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Queisser into Inselberg in order to quantify the optical characteristics of samples subjected to different processing conditions allows the effects of the different processing conditions to be controlled to provide improved products.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A Amini whose telephone number is 703-605-4248. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi can be reached on 703-305-4713. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Javid A Amini
Examiner
Art Unit 2672

Javid Amini


JEFFERY BRIEN
PRIMARY EXAMINER